## MATH 120 (Washington) Fall 2018

Lectures: ESJ 2208 TuTh 11:00 - 12:15

Lecturer: Larry Washington Office: Math 4415 Phone: (301)405-5116 e-mail: lcw@math.umd.edu Office hours: Monday 10:30am-11:30am and Thursday 12:40pm - 1:45pm

Sections 0311-0361

Course web page: http://math.umd.edu/~lcw/120.html. Course announcements will be on Elms. Teaching Assistants:

\*\*\*\* Office: MTH0209 e-mail: \*\*\*@math.umd.edu

Sections \*\*\*\* Room: ESJ 1309; Section 0341: ESJ 2212

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**Description**: An introduction to calculus for students in the social and management sciences, business, and architecture. Applications of calculus form an important part of the course.

**Text**: Every student is required to purchase a subscription to MyMathLab, which will include an electronic version of *Calculus and its Applications*, 14th ed., by Goldstein, Lay, Schneider, and Asmar. The online homework is done through MyMathLab. Most students find that the electronic version of the book suffices and they do not buy the much more expensive hard copy of the book. You should buy MyMathLab through the links on Canvas, NOT directly from the publisher.

**Topics**: (in Calculus and its Applications)

Chapter 1:	Derivatives	3 lectures		
Chapter 2:	Applications of derivatives	5 lectures		
Chapter 3:	Techniques of differentiation	1 lecture		
Chapter 4:	Exponentials and logarithms	2 lectures		
Chapter 5:	Applications of exp. and log.	3 lectures		
Chapter 6:	Integration	3 lectures		
Chapter 7:	Functions of several variables	3 lectures		
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Exams: September 27, October 25, November 22.

Each student must bring her or his University picture ID card to the exams. Makeup exams will not be given unless a student can present substantial evidence that an absence was caused by serious illness, a death in the immediate family, religious observance, participation in University activities at the request of University authorities, or compelling circumstances beyond the student's control. If the absence is caused by foreseeable circumstances, notice must be given **in advance** in order to be allowed to take a makeup exam. Students who do not provide adequate documentation for their absence will receive a score of zero for the exam. Each exam is worth 100 points and will last 75 minutes.

For more on University policies for absences and many other issues, see <a href="http://www.ugst.umd.edu/documents/CourseRelatedPolicies.pdf">http://www.ugst.umd.edu/documents/CourseRelatedPolicies.pdf</a>

Calculators are not allowed during exams and quizzes. Smart watches, etc., may not be worn during exams and quizzes.

**Homework:** Homework is on-line using MyMathLab. At the end of the term, the total homework score will be converted to a 50-point basis.

**Quizzes:** Most Discussion sections will have with a short 10-minute quiz. The questions on the quiz will be **identical** to MyMathLab questions, except possibly with different numbers. Plus each quiz will have one 2-point problem from the Algebra Review Sheet. The sections for the quiz are listed on the Course Schedule. Usually the sections are those covered in the current week's lectures. At the end of the term, the lowest two quizzes will be dropped and the total quiz score for the remaining quizzes will be converted to a 100-point basis. The rules for makeup quizzes are the same as those listed above for exams.

Lecture Questions: During many lectures, there will be "clicker" questions (using the Turning Point software). Scores on these will be based more on participation than on correctness. Students should bring the appropriate electronic device (smart phone, laptop, tablet, etc.) to each lecture. At the end of the term, the total score for these activities will be converted to a 50-point basis. You do not need a clicker device. Your smart phone works. Instructions on registering the device will be given in class.

**Recording Lectures:** The classes in the lecture room (ESJ 2208) will be recorded and the recordings will be available on Elms.

**Final Exam**: Wednesday, December 12, 1:30-3:30pm. You must bring your University picture ID to the final. The final exam will last 2 hours.

## Grading

Midterms: 100 points each

Quizzes: 100 points total

Lecture questions: 50 points total

Homework: 50 points total

Final exam: 200 points

The lowest one of the following will be subtracted from the total: 1/2 of the lowest midterm score, 1/2 the quiz total, the lecture questions, the homework, 1/4 of the final exam score.

The total possible score for the course is 650 points.

Grades will be assigned approximately as follows: A: 90% - 100%, B: 80% - 89%, C: 70% - 79%, D: 60% - 69%,  $F: \leq 59\%$ . Plus and Minus grades will be used.

**Calculators**: Calculators and smart phones and watches will not be allowed for quizzes and exams. They may be used for other in-class activities and for homework.

## Schedule of book sections to be covered (subject to adjustment if there are snow days, etc.)

Week	Tuesday	Thursday	Friday Discussion
8/25 - 8/31	1.1, 1.2	1.3, 1.6	Discussion of 1.1 through 1.6
9/3 - /9/7	1.7, 1.8	2.1, 2.2	Quiz: 1.6, 1.7, 2.1, 2.2
9/10 - 9/14	2.3	2.5	Quiz: 2.3, 2.5
9/17 - 9/21	2.5	2.6	Quiz: 2.5, 2.6
9/24 - 9/28	Review	Exam 1	Return Exam 1
10/1 - 10/5	3.1	4.1, 4.2. 4.3	Quiz: 3.1, 4.1, 4.2, 4.3
10/8 - 10/12	4.4, 4.5	5.1, 5.2	Quiz: 4.4, 4.5, 5.1, 5.2
10/15 - 10/19	5.3	5.4	Quiz: 5.3, 5.4
10/22 - 10/26	Review	Exam 2	Return Exam 2
10/29 - 11/2	$6.1 \ 6.2, \ 6.3$	6.3, 6.4	Quiz: 6.1, 6.2, 6.3, 6.4
11/5 - 11/9	Probability	7.2	Quiz: Prob., 7.2
11/14 - 11/16	7.2	7.3	Quiz: 7.2, 7.3
11/19 - 11/23	Review	Exam 3	Return Exam 3
11/26 - 11/30	Review	No Class	No Class
12/3 - 12/7	Review	Review	Review

FINAL EXAM: Wednesday, December 12, 1:30pm - 3:30pm

## NOTES

There are 3 exams and a final, for a total of 4 exams.

The overall score from quizzes is the equivalent of one midterm. If you miss all of the quizzes, the highest average you can get (if you have perfect scores on everything else) is 92.3% = A-. Since you know the list of questions for each quiz (they are the MyMathLab problems due that morning), you should try to do well on the quizzes, since they can raise your average for the course.

If you skip all of the homework, miss all of the quizzes, and skip all of the clicker questions, and get perfect scores on all exams, you will have an overall average of 76.9% = C. Therefore, you should do the homework, the quizzes, and the clickers, since they are designed to raise your score.

Elms gives you an average for the course throughout the semester. This number is not accurate, so you should take it only as a rough estimate of how you are doing.

Here is an example of how grades are calculated, using the above description: Suppose your quiz average (after dropping the lowest two quizzes) is 85%, your midterms are 88, 52, and 79. Your Final is 150/200. Your Clicker score is 48/50, and your HW score is 47/50. Then your lowest score is the 52/100 on the second midterm, so it gets changed to 26/50 (it counts half). Your point total is

quizzes + exam + exam + final + clickers + HW = 85 + 88 + 26 + 79 + 150 + 48 + 47 = 523.

This is out of 650 possible points, so the overall average is 530/650 = 81.5, which is a B-. If the second midterm had been recorded as 52/100 instead of 26/50, the overall average would have been 78.4, which is a C+.